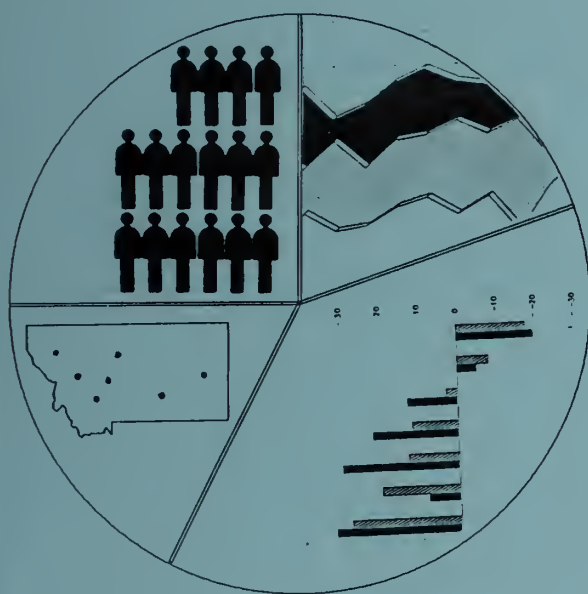


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OCCUPATIONAL EMPLOYMENT STATISTICS OF MONTANA 1989



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The Montana State Job Service Division maintains 23 local Job Service Offices in principal cities of Montana. You are invited to call on any of these offices for assistance in filling positions in your organization, obtaining additional labor market information and for receiving other services in connection with your employment needs.

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Anaconda, MT 59711
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Glasgow, MT 59230
(228-9369)

KALISPELL

427 First Ave. E
Kalispell, MT 59901
(752-5627)

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417 Main Street
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Polson, MT 59860
(883-5261)

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Billings, MT 59101
(259-5529)

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Glendive, MT 59330
(365-3314)

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Lewistown, MT 59457
(538-8701)

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402 First St. S
Shelby, MT 59474
(434-5161)

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121 N Willson
Bozeman, MT 59715
(586-5455)

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1018 7th St. S
Great Falls, MT 59405
(761-1730)

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317 Mineral Ave.
Libby, MT 59923
(293-2682)

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120 South Central
Sidney, MT 59270
(482-1204)

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206 W Granite
P.O. Box 309
Butte, MT 59703
(782-0417)

HAMILTON

333 Main Street
P.O. Box 73
Hamilton, MT 59840
(363-1822)

LIVINGSTON

228 South Main
P.O. Box 1199
Livingston, MT 59047
(222-0520)

THOMPSON FALLS

608 Main Street
P.O. Box 669
Thompson Falls, MT 59873
(827-3472)

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20 S Central
Cut Bank, MT 59427
(873-2191)

HAVRE

416 First Street
Havre, MT 59501
(265-5847)

MILES CITY

12 North 10th St
P.O. Box 1786
(232-1316)

WOLF POINT

200 Highway 2 East
Wolf Point, MT 59201
(653-1720)

DILLON

310 E Sebree
P.O. Box 1300
Dillon, MT 59725
(683-5501)

HELENA

715 Front Street
Helena, MT 59601
(449-6006)

MISSOULA

539 S 3rd St. W
P.O. Box 5027
Missoula, MT 59806
(728-7060)

1989 Statewide Survey of

Manufacturing

State of Montana
Stan Stephens, Governor

Department of Labor and Industry
Mike Micone, Commissioner

Montana Department of
Labor and Industry
Research & Analysis Bureau
Labor Market Information Section
P.O. Box 1728
Helena, Montana 59624

November, 1990

ACKNOWLEDGEMENTS

We would like to express our appreciation to all the employers who took the time to complete the survey questionnaires. Their cooperation and support is the key to a successful Occupational Employment Statistics program.

Acknowledgement is also to be given to the Bureau of Labor Statistics offices in Washington, D.C. and Kansas City, Missouri for their financial and technical support.

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INTRODUCTION

The Occupational Employment Statistics Program (OES) was developed by the United States Bureau of Labor Statistics to meet a demand for current occupational information. The program is designed to: (1) provide staffing profiles by industry, (2) identify emerging and disappearing occupations, (3) assist in the development of educational and training programs, and (4) provide current occupational information for employment and educational counselors.

The OES survey covers all nonagricultural industries, excluding private households. The survey is conducted over a three year cycle. Its purpose is to obtain employment information by occupation by industry. Manufacturing and hospital industries are surveyed in the first year; one-half of the nonmanufacturing industries in the second year, and the remainder of the nonmanufacturing industries in the third year. Data is collected from employing establishments primarily by mail; telephone followups and personal visits are also used. The survey is based on a random sample, broken out by industry and size. It is designed to represent all establishments covered by the survey. The data obtained from the survey are then used to estimate employment by occupation and industry.

A major component of the OES system is the development of an industry/occupation model representing the occupational staffing patterns of each industry. Basically, it reflects the typical staffing pattern of each industry in terms of the ratio of occupational employment in each industry to total employment in each industry. The data are arrayed in the form of a grid, industries by occupations. The value of the matrix in this form is that it shows where people work and what they do.

The information contained in this publication portrays the results of the 1989 OES survey of the manufacturing industries in Montana.

METHODOLOGY

The Sample. The sample for this survey was selected from the ES-202 report, which is a listing of all employing units within the state covered under the unemployment insurance law. The units were categorized by industry, 3 digit Standard Industrial Classification (SIC) and within industry by size. Each sample part was assigned a sample ratio based upon the employment within that part. The present survey consisted of a sample of approximately 600 establishments with more than 98,000 jobs.

The Survey Questionnaire. The questionnaires used for the OES survey were tailored to each specific industry's occupational structure. For example, the questionnaire for a trucking firm did not list "blueprint machine operator" as an occupation. Respondents were asked to report each worker in the appropriate occupational category listed on the form and to count an employee only once. Each questionnaire was limited to a maximum of 200 occupations; residual categories, such as "all other professional workers" were included so that total employment could be listed. Employers were asked to identify occupations and duties listed in the residual categories so that these occupations could be identified.

Estimating Procedure. The estimating method used in this survey was a ratio estimate. Each unit within a size class within a three digit SIC was assigned a weight. The weight assigned was the inverse of the sampling ratio, the probability of sample selection. Estimates were calculated by 1) taking the total employment and the employment for each occupation reported and multiplying them by the sample weight for each establishment in the estimating cell; 2) deriving the ratio of the summed weighted occupational employment to the summed weighted reported employment for each cell; and, 3) the ratio derived in the previous step was multiplied by the benchmark employment for that estimating cell as of the reference date of the survey, yielding the occupational structure of each estimating cell. The reference date of the survey was: April 1989 for SIC 23 and 33; June 1989 for SIC 20 and 28; May 1989 for all other SIC's.

Limitations of Data. The estimates in this report were based on a sample. It is unlikely that the numbers would be exactly the same had it been possible to take a complete census of all establishments in each industry. The probable error resulting from sampling is indicated by the estimates' relative error for each occupation. Nonsampling errors may also taint the accuracy of the estimates. These errors arise from faulty response to survey questionnaires, physical errors in processing surveys, computational errors, etc. Great care was taken to minimize these errors as much as possible. Employment counts were not complete. All employment data in the report relate to the nonagricultural wage and salaried class of worker exclusively. Those excluded from the counts were agricultural type industries, self-employed and unpaid family workers. Finally, the "work-force" concept of employment was used in the study; that is, the counts reflect the number of jobs and not the persons holding the jobs.

METHODOLOGY (Continued)

Publishing Criteria. A. The criteria used in publishing the employment estimates for a particular industry were 1) that a response rate of at least 50% of the employment within that industry was obtained, and 2) that the total estimated employment within that industry be at least 500. If these two conditions were not met, employment estimates for that particular industry were not made. Nor would employment estimates for a particular industry be published if the industry is dominated by one or two employers who for confidentiality reasons do not wish to have the results of their survey published.

B. The criteria used in publishing a specific occupation were 1) that the estimated employment be at least 10, and 2) that the estimate for that particular occupation have a relative error of less than 50%. If these two conditions were not met, then the estimated employment for the occupation was rolled into the appropriate "All Other" category.

TABLES

Table Format. The following tables are a listing of the individual industry/occupation staffing patterns resulting from the OES estimating system. The data have been edited following Bureau of Labor Statistics criteria. The tables are set up with the industry's SIC number and name followed by the SIC definition.

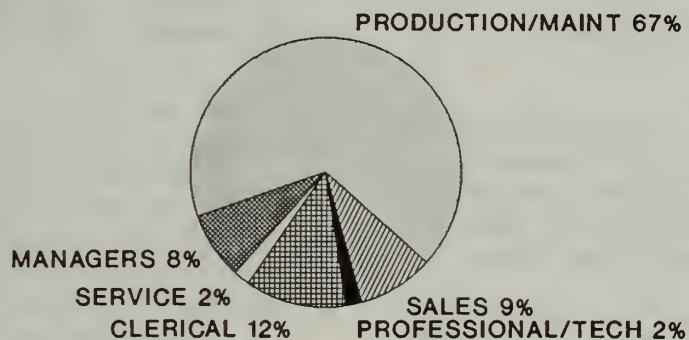
Table Definitions.

SIC	The Standard Industrial Classification is a classification system developed by the federal government to define industries in accordance with the composition and structure of the economy.
BENCHMARK	The benchmark is the specific employment figure which existed for the industry at the reference point.
OCCUPATION	The occupations in the OES survey are broken down into seven categories: managerial/administrative, professional/technical, sales, clerical/administrative support, service, agricultural/related, and production/maintenance workers. Subtotals of each category are provided.
ESTIMATED EMPLOYMENT	The estimated employment is produced by the OES estimating system.
ANNUAL AVERAGE EMPLOYMENT	The annual average employment is produced by the ES-202 employment system. NOTE: Because this is an annualized number, it will be slightly different than the OES "estimated" employment number. (OES uses a reference month).
RELATIVE ERROR	The relative error is a measure of precision and expresses the absolute sampling error of an estimate as a percentage of that estimate. From an accuracy standpoint, the higher the relative error the less accurate the estimate. If the relative errors exceeded fifty percent, the employment from these occupations were added to the appropriate residual (all other) category.
% TOTAL EMPLOYMENT	The percent of total employment reflects the rate of occurrence of an occupation or category of occupations in an industry.
--	Indicates that the data for this item are either not available or not applicable.

FOOD AND KINDRED PRODUCTS

SIC 20

DISTRIBUTION OF OCCUPATIONAL GROUPS



ANNUAL AVERAGE EMPLOYMENT

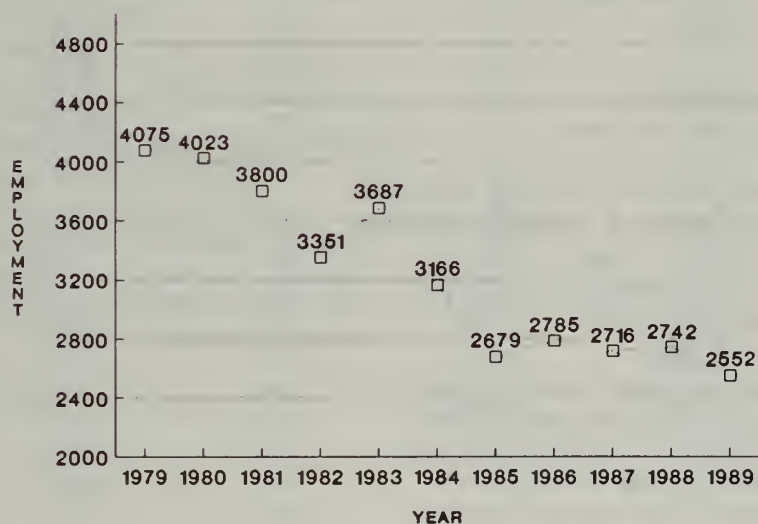


TABLE 1

INDUSTRY 20

FOOD AND KINDRED PRODUCTS

THIS MAJOR GROUP INCLUDES ESTABLISHMENTS MANUFACTURING OR PROCESSING FOODS AND BEVERAGES FOR HUMAN CONSUMPTION, AND CERTAIN RELATED PRODUCTS, SUCH AS MANUFACTURED ICE, CHEWING GUM, VEGETABLE AND ANIMAL FATS AND OILS, AND PREPARED FEEDS FOR ANIMALS AND FOWLS.

OCCUPATIONAL ESTIMATES

OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
1. MANAGERIAL AND ADMINISTRATIVE:			
INDUSTRY PRODUCTION MANAGER	20	.8	31
GENERAL MANAGERS AND TOP EXEC	160	6.5	9
ALL OTHER MANAGERS AND ADMIN	20	.8	--
TOTAL MANAGERS AND ADMIN	200	8.1	
2. PROFESSIONAL AND TECHNICAL:			
ACCOUNTANTS AND AUDITORS	10	0.4	28
PURCHASING AGENT/BUY, FARM PRODTS	10	0.4	20
CHEMISTS	10	0.4	0
BIO.,AGRI. AND FOOD TECHNICIANS	10	0.4	49
TOTAL PROFESSIONAL AND TECH	40	1.6	
3. SALES AND RELATED:			
SUPERVISORS, SALES & RELATED	20	.8	28
NONTECH SALES, EXCEPT RETAIL	50	.2	39
SALESPERSONS, RETAIL	60	2.4	41
CASHIERS	70	2.8	3
ALL OTHER SALES WORKERS	30	1.2	--
TOTAL SALES AND RELATED	230	9.3	
4. CLERICAL AND ADMINISTRATIVE SUPPORT:			
SUPERVISORS, CLERICAL & ADMINISTRATIVE	30	1.2	42
SECRETARIES, EXCEPT LEGAL & MEDICAL	20	.8	28
ORDER CLERKS, MERCHANDISE & SERVICE	10	.4	0
BOOKKEEPING AND ACCOUNTING CLERKS	100	4.0	27
GENERAL OFFICE CLERKS	30	1.2	31
BILLING,POSTING & CALC. MACH OPERS	10	.4	0
ALL OHTER OFFICE MACHINE OPERATORS	10	.4	--
WEIGHERS & SAMPLERS - RECORDKEEPING	10	.4	49
SHIPPING AND RECEIVING CLERKS	90	3.6	36
TOTAL CLERICAL AND ADMIN SUPPORT	310	12.4	

TABLE 1 (CONTINUED)

INDUSTRY 20

FOOD AND KINDRED PRODUCTS

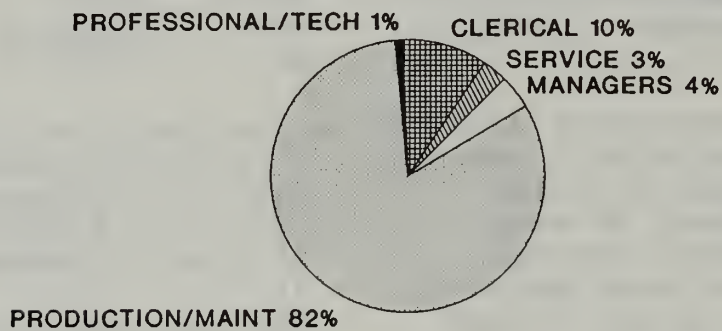
OCCUPATIONAL ESTIMATES			
OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
5. SERVICE:			
SUPERVRS, ALL OTHER SERVICE	10	.4	--
JANITORS AND CLEANERS	40	1.6	17
TOTAL SERVICE	50	2.0	
6. PRODUCTION, CONSTRUCTION, OPERATING, MAINTENANCE AND MATERIAL HANDLING:			
SUPERVR, PRODUCTION AND RELATED	60	2.4	12
MACHINERY MAINTENANCE MECHANICS	30	1.2	21
MAINTENANCE REPAIRERS, GEN UTIL	10	.4	33
BUS,TRUCK & DIESEL ENGINE MECHANICS	10	.4	19
COIN AND VENDING MACHINE SERV&REPR	30	1.2	33
SLAUGHTERERS AND BUTCHERS	40	1.6	27
FOOD BATCHMAKERS	280	11.3	4
ALL OTHER PRECISION FOOD WORKERS	30	1.2	--
COOKING MACHINE OPERATORS, FOOD	10	.4	26
DAIRY PROC EQUIP SETTERS & OPERATORS	100	4.0	43
CUTTING & SLICING MACHINE OPERATORS	30	1.2	11
CRUSHING & MIXING MACHINE OPERATORS	40	1.6	13
PACKING AND FILLING MACHINE OPERATORS	140	5.6	26
ALL OTHER MACHINE OPERATORS & TENDERS	40	1.6	--
ALL OTHER HAND WORKERS	10	.4	--
HEAVY TRUCK DRIVERS, INCL SEMI'S	110	4.5	13
LIGHT TRUCK DRIVERS, INCL DELIVERY	60	2.4	48
DRIVER/SALES WORKERS	260	10.5	17
INDUSTRIAL TRUCK AND TRACTOR OPERATORS	10	.4	37
CONVEYOR OPERATORS AND TENDERS	10	.4	0
MACHINE FEEDERS & OFFBEARERS	20	.8	6
ALL OTHER FREIGHT & MATERIAL MOVERS	110	4.5	27
VEHICLE WASHERS & EQUIPMENT CLEANERS	10	.4	38
ALL OTHER HELPERS,LABORERS,HAND WORK	200	8.1	--
TOTAL PROD, CONST, MAINT & HANDL	1,650	66.5	
GRAND TOTAL OF INDUSTRY 20	2,480	100.0%	

APPAREL AND OTHER

FINISHED PRODUCTS

SIC 23

DISTRIBUTION OF OCCUPATIONAL GROUPS



ANNUAL AVERAGE EMPLOYMENT

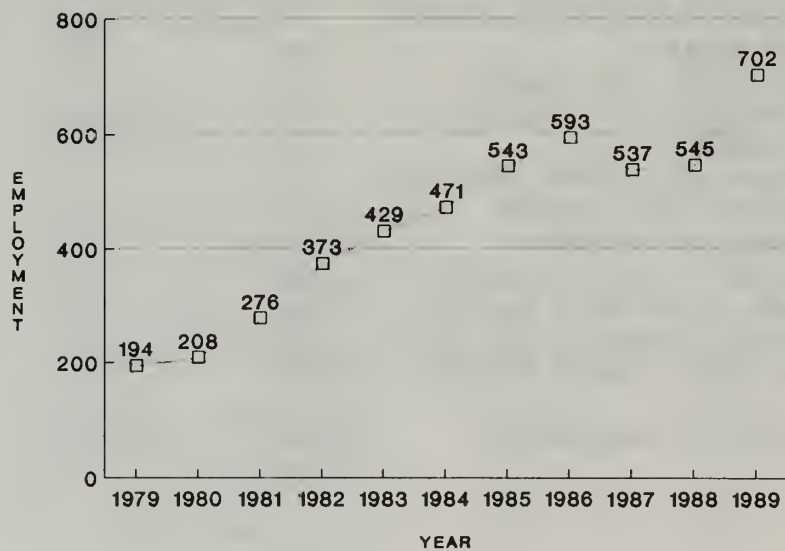


TABLE 2

INDUSTRY 23

APPAREL AND OTHER FINISHED PRODUCTS

THIS MAJOR GROUP, KNOWN AS THE CUTTING-UP AND NEEDLE TRADES, INCLUDES ESTABLISHMENTS PRODUCING CLOTHING AND FABRICATING PRODUCTS BY CUTTING AND SEWING PURCHASED WOVEN OR KNIT TEXTILE FABRICS AND RELATED MATERIALS SUCH AS LEATHER, RUBBERIZED FABRICS, PLASTICS.

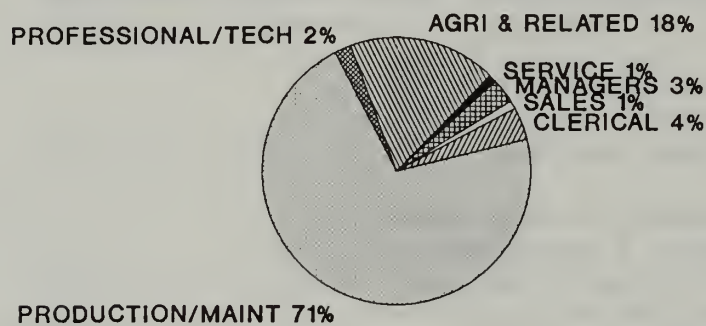
OCCUPATIONAL ESTIMATES

OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
1. MANAGERIAL AND ADMINISTRATIVE:			
INDUSTRIAL PRODUCTION MANAGERS	10	1.4	18
GENERAL MANAGERS AND TOP EXEC	20	2.8	12
TOTAL MANAGERS AND ADMIN	30	4.2	
2. PROFESSIONAL AND TECHNICAL:			
ALL OTHER PROF, PARAPROF, TECHNICAL	10	1.4	--
TOTAL PROFESSIONAL AND TECH	10	1.4	
3. CLERICAL AND ADMINISTRATIVE SUPPORT:			
SUPERVISORS, CLERICAL & ADMINISTRATIVE	10	1.4	0
SECRETARIES, EXCEPT LEGAL & MEDICAL	10	1.4	0
BOOKKEEPING AND ACCOUNTING CLERKS	10	1.4	0
GENERAL OFFICE CLERKS	10	1.4	0
PRODUCTION & PLANNING CLERKS	10	1.4	0
STOCK CLERKS, STOCKROOM & WAREHOUSE	10	1.4	0
TRAFFIC, SHIPPING & RECEIVING CLERK	10	1.4	0
TOTAL CLERICAL AND ADMIN SUPPORT	70	9.8	
4. SERVICE:			
GUARDS AND WATCH GUARDS	10	1.4	0
JANITORS AND CLEANERS	10	1.4	0
TOTAL SERVICE	20	2.8	
5. PRODUCTION, CONSTRUCTION, OPERATING, MAINTENANCE AND MATERIAL HANDLING:			
SUPERVR, MECHANICS, INSTALLERS&REPAIR	10	1.4	0
SUPERVR, PRODUCTION AND RELATED	30	4.2	4
PRODUCTION INSPECTORS & TESTERS	20	2.8	2
ALL OTHER MECHANICS, INSTALERS&REPAIR	10	1.4	--
MACHINISTS	10	1.4	0
PLASTIC MOLD&CASTING MACHINE OPERS	10	1.4	0
SCREEN PRINTING MACHINE OPERATORS	10	1.4	0
TEXTILE MACHINE OPERATORS	10	1.4	10
SEWING MACHINE OPERATORS, GARMENT	140	19.7	4
SEWING MACHINE OPERATORS, NONGARMT	60	8.5	6
ALL OTHER MACHINE OPERATORS	10	1.4	--
PORTABLE MACHINE CUTTERS	10	1.4	20
ASSEMBLERS & FABRICATORS, NONELEC	230	32.4	1
HAND PACKERS & PACKAGERS	20	2.8	6
TOTAL PROD, CONST, MAINT & HANDL	580	81.7	
GRAND TOTAL OF INDUSTRY 23	710	100.0%	

LUMBER AND WOOD PRODUCTS

SIC 24

DISTRIBUTION OF OCCUPATIONAL GROUPS



ANNUAL AVERAGE EMPLOYMENT

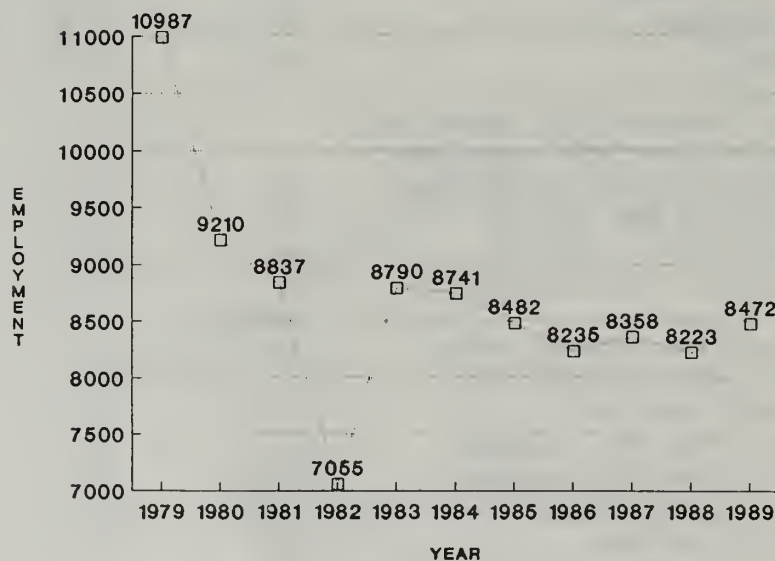


TABLE 3

INDUSTRY 24

LUMBER AND WOOD PRODUCTS, EXCEPT FURNITURE

THIS MAJOR GROUP INCLUDES LOGGING CAMPS ENGAGED IN CUTTING TIMBER AND PULPWOOD; MERCHANT SAWMILLS, LATH MILLS, SHINGLE MILLS, COOPERAGE STOCK MILLS, PLANING MILLS, AND PLYWOOD MILLS AND VENEER MILLS ENGAGED IN PRODUCING LUMBER AND WOOD BASIC MATERIALS; AND ESTABLISHMENTS ENGAGED IN MANUFACTURING FINISHED ARTICLES MADE ENTIRELY OR MAINLY OF WOOD OR RELATED MATERIALS.

OCCUPATIONAL ESTIMATES

OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
1. MANAGERIAL AND ADMINISTRATIVE:			
FINANCIAL MANAGERS	10	.1	40
INDUSTRIAL PRODUCTION MANAGERS	60	.7	12
GENERAL MANAGERS AND TOP EXEC	180	2.1	9
TOTAL MANAGERS AND ADMIN	250	2.9	
2. PROFESSIONAL AND TECHNICAL:			
ACCOUNTANTS AND AUDITORS	30	.4	13
PURCHASING AGENTS, EXCEPT FARM	30	.4	15
PERSONNEL AND RELATED SPECIALISTS	10	.1	31
COST ESTIMATORS	10	.1	43
MECHANICAL ENGINEERS	10	.1	33
ALL OTHER ENGINEERS	10	.1	--
DRAFTERS	20	.2	35
FORESTERS & CONSERVATION SCIENTISTS	20	.2	44
ALL OTHER HEALTH PROF & TECHNICIANS	10	.1	--
TOTAL PROFESSIONAL AND TECH	150	1.7	
3. SALES AND RELATED:			
NON-TECH SALES REPS, EXCEPT RETAIL	30	.4	20
ALL OTHER SALES AND RELATED	20	.2	--
TOTAL SALES AND RELATED	50	.6	
4. CLERICAL AND ADMINISTRATIVE SUPPORT:			
SUPVR, CLERICAL AND ADMIN SUPPORT	10	.1	20
SECRETARIES, EXCEPT LEGAL & MEDICAL	60	.7	12
PERSONNEL CLERKS, EXCEPT PAYROLL	10	.1	29
BOOKKEEPING AND ACCOUNTING CLERKS	110	1.3	11
PAYROLL AND TIMEKEEPING CLERKS	10	.1	38
GENERAL OFFICE CLERKS	80	.9	13
SWITCHBOARD OPERATORS	10	.1	28
PRODUCTION & PLANNING CLERKS	10	.1	17
WEIGHERS & SAMPLERS, RECORDKEEPING	20	.1	16
STOCK CLERKS, STOCKROOM & WAREHOUSE	10	.1	0
TRAFFIC, SHIPPING & RECEIVING CLERKS	20	.2	27
TOTAL CLERICAL AND ADMIN SUPPORT	340	4.0	

TABLE 3 (CONTINUED)

INDUSTRY 24

LUMBER AND WOOD PRODUCTS

OCCUPATIONAL ESTIMATES			
OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
5. SERVICE:			
GUARDS AND WATCH GUARDS	50	.6	22
JANITORS AND CLEANERS	50	.6	23
TOTAL SERVICE	100	1.2	
6. AGRICULTURAL AND RELATED:			
SUPERVR, AGRICULTURAL AND RELATED	70	.8	19
FALLERS AND BUCKERS	460	5.4	6
CHOKE SETTERS	130	1.5	18
LOG HANDLING EQUIPMENT OPERATORS	240	2.8	15
LOGGING TRACTOR OPERATORS	540	6.3	8
LOG GRADERS AND SCALERS	70	.8	15
TOTAL AGRICULTURAL AND RELATED	1,510	17.7	
7. PRODUCTION, CONSTRUCTION, OPERATING, MAINTENANCE AND MATERIAL HANDLING:			
SUPERVR, MECHANICS, INSTALLERS&REPAIR	20	.2	28
SUPERVR, PRODUCTION AND RELATED	230	2.7	9
SUPERVR, HELPERS, LABORERS & MOVERS	20	.2	44
SUPERVISORS, ALL OTHER	20	.2	--
PRECISION INSPECTORS, TESTERS, GRADERS	100	1.2	27
PRODUCTION INSPECTORS & TESTERS	100	1.2	19
MACHINERY MAINTENANCE MECHANICS	100	1.2	16
MILLWRIGHTS	140	1.6	19
MACHINERY MAINTENANCE WORKERS	90	1.0	11
MAINTENANCE REPAIRERS, GEN. UTILITY	210	2.5	13
AUTOMOTIVE MECHANICS	20	.2	40
BUS, TRUCK & DIESEL ENGINE MECHANICS	10	.1	45
MOBILE HEAVY EQUIPMENT MECHANICS	40	.5	27
ALL OTHER MECHANICS, INSTALER&REPAIR	10	.1	--
CARPENTERS	90	1.1	24
ELECTRICIANS	80	.9	9
PLUMBERS AND PIPEFITTERS	10	.1	0
ALL OTHER CONSTR AND EXTRACTION WKS	10	.1	--
MACHINISTS	20	.2	12
PRECISION GRINDERS, ETC.	130	1.5	12
(#7 CONTINUED ON NEXT PAGE)			

TABLE 3 (CONTINUED)

INDUSTRY 24

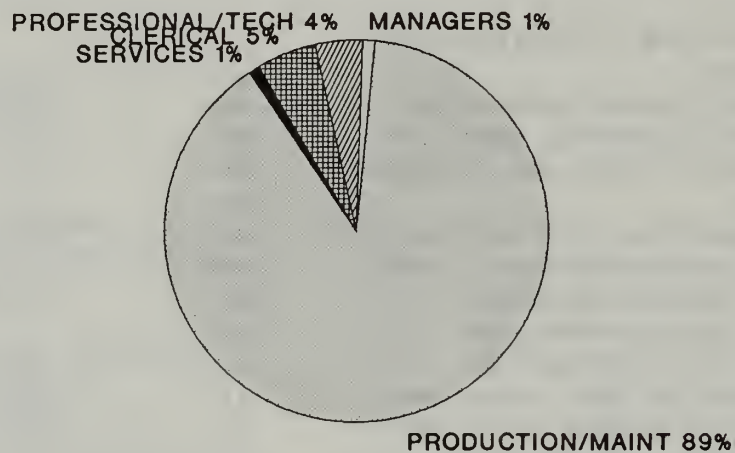
LUMBER AND WOOD PRODUCTS

OCCUPATIONAL ESTIMATES			
OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
(#7 CONTINUED FROM PRECEDING PAGE)			
WOOD MACHINISTS	20	.2	34
CABINETMAKERS & BENCH CARPENTERS	80	.9	31
ALL OTHER PRECISION WOOD WORKERS	100	1.2	--
SAWING MACHINE SETTERS AND OPERATORS	230	2.7	9
HEAD SAWYERS	120	1.4	12
SAWING MACHINE OPERATORS AND TENDERS	700	8.2	9
WOODWORKING MACHINE SETTERS & OPERS	270	3.2	18
WOODWORKING MACHINE OPERATORS	240	2.8	17
FURNACE AND RELATED OPERATORS	60	.7	18
LOW PRESSURE BOILER OPERATORS	70	.8	23
COATING & PAINTING MACH OPERATORS	10	.1	38
CEMENT & GLUING MACHINE OPERATORS	50	.6	2
CRUSHING, MIXING MACH OPERATORS	20	.2	25
EXTRUDING, FORMING MACH OPERATORS	30	.3	39
PACKAGING, FILLING MACH OPERATORS	40	.4	31
ALL OTHER MACHINE OPER & TENDERS	30	.3	--
WELDERS AND CUTTERS	10	.1	40
ASSEMBLERS & FABRICATORS, NONELEC	60	.7	28
HEAVY TRUCK DRIVERS, INCL SEMI'S	90	1.1	16
GRADER, DOZER & SCRAPER OPERATORS	40	.4	23
HOIST AND WINCH OPERATORS	10	.1	47
INDUSTRIAL TRUCK AND TRACTOR OPER	450	5.3	5
OPERATING ENGINEERS	20	.2	14
ALL OTHER MATERIAL MOVING EQUIP OPER	50	.6	25
CONSTRUCTION & EXTRACTIVE WRKR HELPER	20	.2	19
MACHINE FEEDERS & OFFBEARERS	1,160	13.6	7
ALL OTHER FREIGHT & MATERIAL MOVERS	380	4.4	23
HAND PACKERS & PACKAGERS	30	.3	42
ALL OTHER HELPERS, LABORERS, HAND WORK	300	3.5	--
TOTAL PROD, CONST, MAINT & HANDL	6,140	71.9	
	-----	-----	
GRAND TOTAL OF INDUSTRY 24	8,540	100.0%	

PAPER AND ALLIED PRODUCTS

SIC 26

DISTRIBUTION OF OCCUPATIONAL GROUPS



ANNUAL AVERAGE EMPLOYMENT

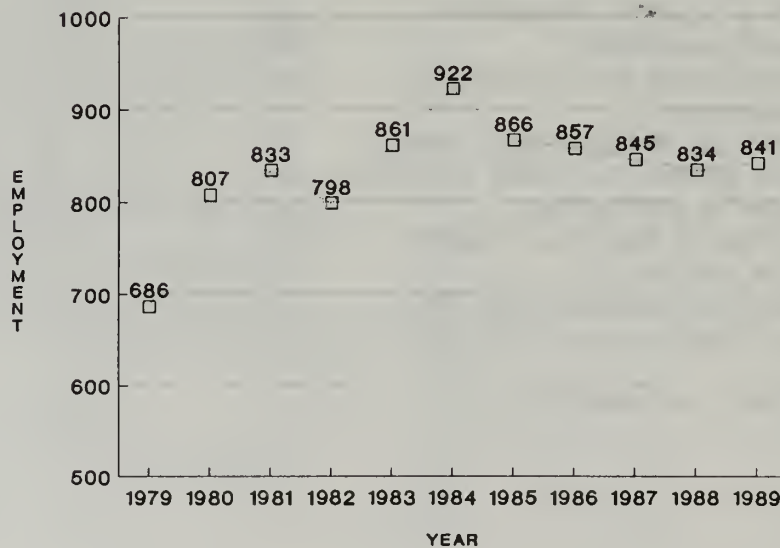


TABLE 4

INDUSTRY 26

MANUFACTURING OF PAPER AND ALLIED PRODUCTS

THIS MAJOR GROUP INCLUDES ESTABLISHMENTS PRIMARILY ENGAGED IN THE MANUFACTURE OF PULPS FROM WOOD AND OTHER CELLULOSE FIBERS, AND FROM RAGS; THE MANUFACTURE OF PAPER AND PAPERBOARD; AND THE MANUFACTURE OF PAPER AND PAPERBOARD INTO CONVERTED PRODUCTS, SUCH AS PAPER COATED OFF THE PAPER MACHINE, PAPER BAGS, PAPER BOXES OR ENVELOPES.

OCCUPATIONAL ESTIMATES

OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
1. MANAGERIAL AND ADMINISTRATIVE:			
ALL OTHER MANAGERS AND ADMIN	10	1.1	--
TOTAL MANAGERS AND ADMIN	10	1.1	
2. PROFESSIONAL AND TECHNICAL:			
ALL OTHER MANAGMT SUPPORT WORKERS	10	1.1	--
CHEMICAL ENGINEERS	20	2.2	0
MECHANICAL ENGINEERS	10	1.1	0
TOTAL PROFESSIONAL AND TECH	40	4.4	
3. CLERICAL AND ADMINISTRATIVE SUPPORT:			
SECRETARIES, EXCEPT LEGAL & MEDICAL	10	1.1	0
BOOKKEEPING AND ACCOUNTING CLERKS	10	1.1	0
TRAFFIC, SHIPPING & RECEIVING CLERKS	10	1.1	0
ALL OHTER CLERICAL & ADMIN SUPPORT	10	1.1	--
TOTAL CLERICAL AND ADMIN SUPPORT	40	4.4	

TABLE 4 (CONTINUED)

INDUSTRY 26

PAPER AND ALLIED PRODUCTS

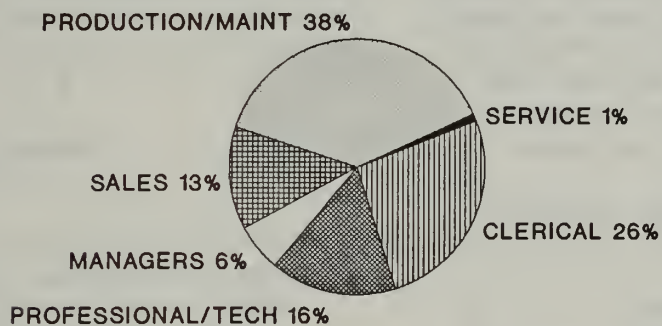
OCCUPATIONAL ESTIMATES			
OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
4. SERVICE:			
GUARDS AND WATCH GUARDS	10	1.1	0
TOTAL SERVICE	10	1.1	
5. PRODUCTION, CONSTRUCTION, OPERATING, MAINTENANCE AND MATERIAL HANDLING:			
SUPERVR, MECHANICS,INSTALLERS&REPAIR	30	3.2	0
SUPERVR, CONSTRUCTION AND RELATED	50	5.4	0
MILLWRIGHTS	110	12.0	0
MACHINERY MAINTENANCE WORKERS	10	1.1	0
AUTOMOTIVE MECHANICS	10	1.1	0
PRECISION INSTRUMENT REPAIRERS	20	2.2	0
ALL OTHER MECHANICS,INSTALER&REPAIR	20	2.2	--
CARPENTERS	20	2.2	0
ELECTRICIANS	30	3.3	0
MACHINISTS	10	1.1	0
PAPER GOODS MACHINE SETUP &OPERS	90	9.7	1
LOW PRESSURE BOILER OPERATORS	70	7.6	0
CLEANING,WASH&PICKLING MACH OPRS	80	8.6	0
ALL OTHER MACHINE OPER & TENDERS	270	29.3	--
TOTAL PROD, CONST, MAINT & HANDL	820	89.0	
	-----	-----	
GRAND TOTAL OF INDUSTRY 26	920	100.0%	

PRINTING, PUBLISHING AND

ALLIED PRODUCTS

SIC 27

DISTRIBUTION OF OCCUPATIONAL GROUPS



ANNUAL AVERAGE EMPLOYMENT

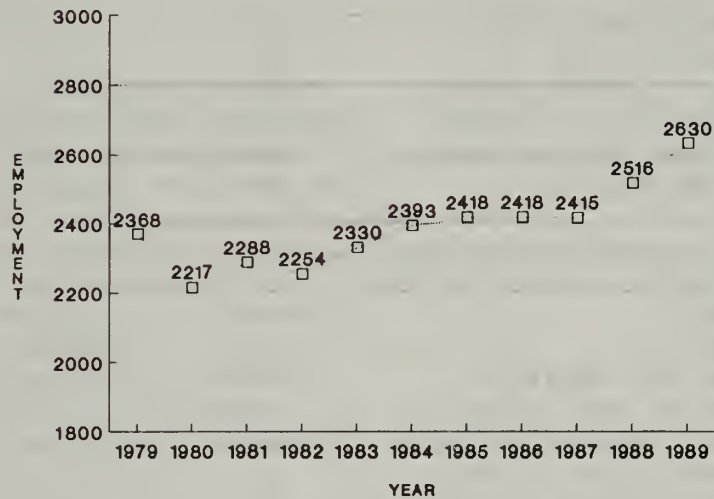


TABLE 5

INDUSTRY 27

PRINTING, PUBLISHING, AND ALLIED INDUSTRIES

THIS MAJOR GROUP INCLUDES ESTABLISHMENTS ENGAGED IN PRINTING BY ONE OR MORE OF THE COMMON PROCESSES, SUCH AS LETTERPRESS, LITHOGRAPHY, GRAVURE, OR SCREEN; AND THOSE ESTABLISHMENTS WHICH PERFORM SERVICES FOR THE PRINTING TRADE, SUCH AS BOOKBINDING, TYPESETTING, ENGRAVING, PHOTOEN- GRAVING, AND ELECTROTYPING. THIS MAJOR GROUP ALSO INCLUDES ESTABLISH- MENTS ENGAGED IN PUBLISHING NEWSPAPERS, BOOKS, AND PERIODICALS, REGARD- LESS OF WHETHER OR NOT THEY DO THEIR OWN PRINTING.

OCCUPATIONAL ESTIMATES

OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
1. MANAGERIAL AND ADMINISTRATIVE:			
MRKTG, ADVERTISING AND P/R MGRS	50	1.9	13
INDUSTRIAL PRODUCTION MANAGERS	10	.4	26
GENERAL MANAGERS AND TOP EXEC	90	3.5	10
ALL OTHER MANAGERS AND ADMIN	10	.4	--
TOTAL MANAGERS AND ADMIN	160	6.2	
2. PROFESSIONAL AND TECHNICAL:			
ALL OTHER FINANCIAL SPECIALISTS	10	.4	--
COST ESTIMATORS	10	.4	30
COMPUTER PROGRAMMERS	10	.4	35
WRITERS AND EDITORS	150	5.6	7
REPORTERS AND CORRESPONDENTS	160	6.2	13
PHOTOGRAPHERS	30	1.2	19
ARTISTS AND RELATED WORKERS	30	1.2	19
DESIGNERS, EXCEPT INTERIOR	10	.4	25
TOTAL PROFESSIONAL AND TECH	410	16.0	
3. SALES AND RELATED:			
SUPERVISORS, SALES AND RELATED	70	2.7	14
SALES AGENTS, ADVERTISING	150	5.8	7
NONTECHNICAL SALES, EXCEPT RETAIL	40	1.6	18
NEWS VENDORS, AND RELATED WORKERS	50	1.9	13
ALL OTHER SALES AND RELATED WORKERS	20	.8	--
TOTAL SALES AND RELATED	330	12.8	
4. CLERICAL AND ADMINISTRATIVE SUPPORT:			
SUPERVISORS, CLERICAL & ADMIN SUPPORT	20	.8	16
ADJUSTMENT CLERKS	30	1.2	0
ADVERTISING CLERKS	60	2.3	12
PROOFREADERS AND COPY MARKERS	30	1.2	25
SECRETARIES, EXCEPT LEGAL & MEDICAL	50	1.9	15
RECEPTIONISTS AND INFORMATION CLERKS	40	1.6	12
TYPISTS, WORD PROCESSING EQUIPMENT	40	1.6	32
ORDER CLERKS, MERCHANDISE & SERVICE	30	1.2	30
BOOKKEEPING AND ACCOUNTING CLERKS	100	3.9	9
GENERAL OFFICE CLERKS	60	2.3	18

(#4 CONTINUED ON NEXT PAGE)

TABLE 5 (CONTINUED)

INDUSTRY 27

PRINTING, PUBLISHING, AND ALLIED INDUSTRIES

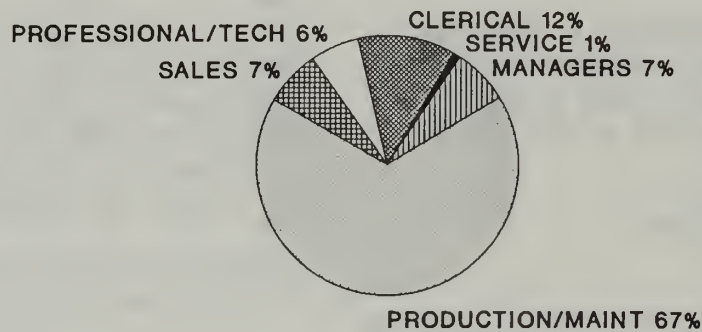
OCCUPATIONAL ESTIMATES			
OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
(#4 CONTINUED FROM PRECEDING PAGE)			
MAILING MACHINE OPERATORS	100	3.9	29
DATA KEYERS, COMPOSING	30	1.2	20
MESSENGERS	30	1.2	19
STOCK CLERKS, STOCKROOM & WAREHOUSE	10	.4	37
TRAFFIC, SHIPPING & RECEIVING CLERKS	20	.8	18
ALL OTHER MATERIAL SCHED & DISTRIBUT	10	.4	--
TOTAL CLERICAL AND ADMIN SUPPORT	660	25.7	
5. SERVICE:			
JANITORS AND CLEANERS	20	.8	23
TOTAL SERVICE	20	.8	
6. PRODUCTION, CONSTRUCTION, OPERATING, MAINTENANCE AND MATERIAL HANDLING:			
SUPERVR, PRODUCTION AND RELATED	50	1.9	16
PRODUCTION INSPECTORS & TESTERS	10	.4	0
MAINTENANCE REPAIRERS, GEN. UTILITY	10	.4	0
PRECISION COMPOSITORS & TYPESETTERS	20	.8	35
JOB PRINTERS	40	1.5	32
PASTE-UP WORKERS	100	3.9	9
ELEC PAGINATION SYSTEM OPERATORS	50	1.9	21
PHOTOENGRAVERS	10	.4	35
CAMERA OPERATORS	20	.8	21
SCANNER OPERATORS	10	.4	0
STRIPPERS	20	.8	36
ALL OTHER PRECISION PRINTING WKRS	10	.4	--
OFFSET LITHOGRAPHIC PRESS OPERATOR	110	4.3	15
LETTERPRESS SETUP AND OPERATORS	30	1.1	31
BINDERY MACHINE SETUP AND OPERATORS	30	1.1	25
TYPESETTING AND COMPOSING MACHINE OPER	80	3.1	22
PRINTING PRESS MACHINE OPERATORS	120	4.7	15
BINDERY MACHINE OPERATORS	50	1.9	21
LIGHT TRUCK DRIVERS, INCL DELIVERY	10	.4	36
DRIVER/SALES WORKERS	40	1.6	41
ALL OTHER TRANSPORTATION WORKERS	10	.4	--
CONVEYOR OPERATORS AND TENDERS	10	.4	0
ALL OTHER FREIGHT & MATERIAL MOVERS	10	.4	--
HAND PACKERS & PACKAGERS	130	5.0	16
ALL OTHER HELPERS, LABORERS, HAND WORK	10	.4	--
TOTAL PROD, CONST, MAINT & HANDL	990	38.5	

GRAND TOTAL INDUSTRY 27	2,570	100.0%	

CHEMICALS AND ALLIED PRODUCTS

SIC 28

DISTRIBUTION OF OCCUPATIONAL GROUPS



ANNUAL AVERAGE EMPLOYMENT

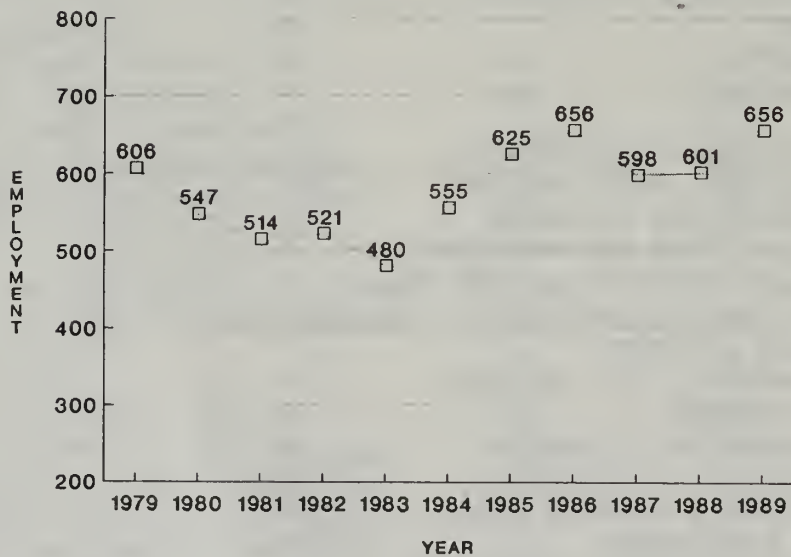


TABLE 6

INDUSTRY 28

MANUFACTURING OF CHEMICALS AND ALLIED PRODUCTS

THIS MAJOR GROUP INCLUDES ESTABLISHMENTS PRODUCING BASIC CHEMICALS, AND ESTABLISHMENTS MANUFACTURING PRODUCTS BY PREDOMINANTLY CHEMICAL PROCESSES. ESTABLISHMENTS CLASSIFIED IN THIS MAJOR GROUP MANUFACTURE THREE GENERAL CLASSES OF PRODUCTS: (1) BASIC CHEMICALS SUCH AS ACIDS, ALKALIES, SALTS, AND ORGANIC CHEMICALS; (2) CHEMICAL PRODUCTS TO BE USED IN FURTHER MANUFACTURE SUCH AS SYNTHETIC FIBERS, PLASTICS MATERIALS, DRY COLORS, AND PIGMENTS; (3) FINISHED CHEMICAL PRODUCTS TO BE USED FOR ULTIMATE CONSUMPTION SUCH AS DRUGS, COSMETICS, AND SOAPS; OR TO BE USED AS MATERIALS OR SUPPLIES IN OTHER INDUSTRIES SUCH AS PAINTS, FERTILIZERS AND EXPLOSIVES.

OCCUPATIONAL ESTIMATES

OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
1. MANAGERIAL AND ADMINISTRATIVE:			
MRKTG, ADVERTISING, AND P/R MANAGERS	10	1.4	20
INDUSTRIAL PRODUCTION MANAGERS	10	1.4	26
GENERAL MANAGERS & TOP EXECUTIVES	30	4.3	8
TOTAL MANAGERS AND ADMIN	50	7.2	
2. PROFESSIONAL AND TECHNICAL:			
ACCOUNTANTS AND AUDITORS	10	1.4	0
CHEMISTS	10	1.4	20
CHEMICAL TECHNICIANS & TECHNOLOGISTS	10	1.4	0
ALL OTHER PROFESSIONAL AND TECH	10	1.4	--
TOTAL PROFESSIONAL AND TECH	40	5.7	
3. SALES AND RELATED:			
SUPERVISORS, SALES AND RELATED	20	2.9	24
NONTECHNICAL SALES, EXCEPT RETAIL	30	4.3	6
TOTAL SALES AND RELATED	50	7.2	
4. CLERICAL AND ADMINISTRATIVE SUPPORT:			
SUPVR, CLERICAL AND ADMIN SUPPORT	10	1.4	17
SECRETARIES, EXCEPT LEGAL & MEDICAL	20	2.9	15
BOOKKEEPING AND ACCOUNTING CLERKS	10	1.4	22
GENERAL OFFICE CLERKS	20	2.9	18
STOCK CLERKS, STOCKROOM & WAREHOUSE	10	1.4	0
TRAFFIC, SHIPPING & RECEIVING CLERKS	10	1.4	0
TOTAL CLERICAL AND ADMIN SUPPORT	80	11.6	
5. SERVICE:			
JANITORS AND CLEANERS	10	1.4	0
TOTAL SERVICE	10	1.4	

TABLE 6 (CONTINUED)

INDUSTRY 28

CHEMICALS AND ALLIED PRODUCTS

OCCUPATIONAL ESTIMATES

OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
6. PRODUCTION, CONSTRUCTION, OPERATING, MAINTENANCE AND MATERIAL HANDLING:			
SUPVR, PRODUCTION & RELATED	30	4.3	19
ALL OTHER MACHINERY MAINT MECHANICS	10	1.4	--
MACHINERY MAINTENANCE WORKERS	10	1.4	0
MAINTENANCE REPAIRERS, GEN. UTILITY	40	5.8	7
MECHANICAL CONTROL VALVE SERV&REPAIR	10	1.4	0
ALL OTHER MECHANIC,INSTALLERS&REPAIR	10	1.4	0
CARPENTERS	10	1.4	0
ELECTRICIANS	10	1.4	0
PLUMBERS AND PIPEFITTERS	10	1.4	0
FURNACE, KILN AND OVEN OPERATORS	30	4.3	0
CHEMICAL EQUIP CONTROLLERS&OPERATORS	10	1.4	0
CHEMICAL EQUIPMENT TENDERS	10	1.4	0
CUTTING & SLICING MACHINE OPERATORS	10	1.4	0
CRUSHING,MIXING,BLENDING OPERATORS	40	5.8	0
EXTRUDING,FORMING MACHINE OPERATORS	10	1.4	0
PACKAGING,FILLING MACHINE OPERATORS	20	2.9	10
WELDERS AND CUTTERS	10	1.4	0
CHEMICAL PLANT & SYSTEM OPERATORS	20	2.9	11
HEAVY TRUCK DRIVERS, INCL SEMI'S	50	7.3	15
ALL OTHER MATERIAL MOVING EQUIP OPER	10	1.4	0
MECHANIC AND REPAIRER HELPERS	10	1.4	0
MACHINE FEEDERS & OFFBEARERS	30	4.3	14
ALL OTHER FREIGHT & MATERIAL MOVERS	10	1.4	31
HAND PACKERS & PACKAGERS	20	2.9	29
ALL OTHER HELPERS,LABORERS,HAND WORK	30	4.3	0
TOTAL PROD, CONST, MAINT & HANDL	460	66.8	
GRAND TOTAL OF INDUSTRY 28	690	100.0%	

PETROLEUM REFINING AND

RELATED INDUSTRIES

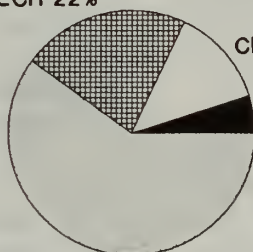
SIC 29

DISTRIBUTION OF OCCUPATIONAL GROUPS

PROFESSIONAL/TECH 22%

CLERICAL 13%

MANAGERS 5%



PRODUCTION/MAINT 60%

ANNUAL AVERAGE EMPLOYMENT

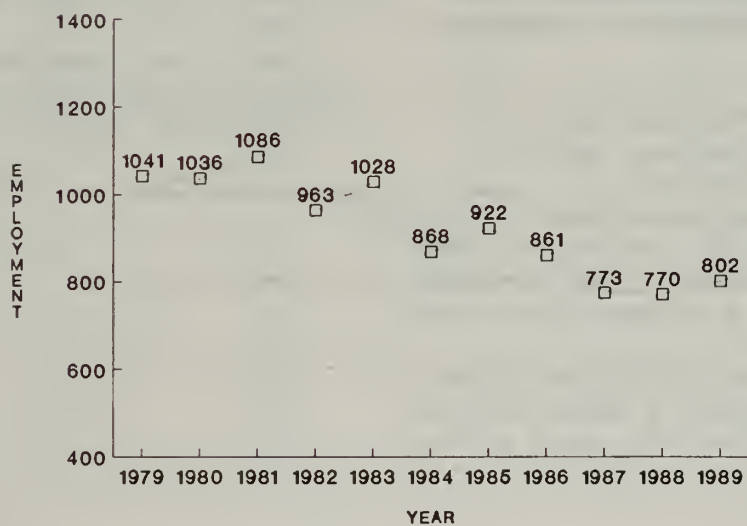


TABLE 7

INDUSTRY 29

PETROLEUM REFINING AND RELATED INDUSTRIES

THIS MAJOR GROUP INCLUDES ESTABLISHMENTS PRIMARILY ENGAGED IN PETROLEUM REFINING, MANUFACTURING PAVING AND ROOFING MATERIALS, AND COMPOUNDING LUBRICATING OILS AND GREASES FROM PURCHASED MATERIALS.

OCCUPATIONAL ESTIMATES

OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
1. MANAGERIAL AND ADMINISTRATIVE:			
ENGINEERING, MATH & SCIENCE MANAGERS	20	2.4	34
MINING AND RELATED MANAGERS	10	1.2	29
GENERAL MANAGERS AND TOP EXEC	10	1.2	29
TOTAL MANAGERS AND ADMIN	40	4.8	
2. PROFESSIONAL AND TECHNICAL:			
ACCOUNTANTS AND AUDITORS	30	3.7	15
ALL OTHER FINANCIAL SPECIALISTS	10	1.2	--
ALL OTHER MGMT SUPPORT WORKERS	10	1.2	--
PETROLEUM ENGINEERS	10	1.2	33
CHEMICAL ENGINEERS	10	1.2	14
ELECTRICAL & ELECTRONIC ENGINEERS	10	1.2	29
COMPUTER ENGINEERS	10	1.2	33
SAFETY ENGINEERS, EXCEPT MINING	10	1.2	20
MECHANICAL ENGINEERS	20	2.4	36
ELEC & ELECTRONIC ENGINEER TECH	10	1.2	35
MECHANICAL ENGINEERING TECHNICIAN	10	1.2	0
CHEMISTS	10	1.2	28
GEOLOGISTS	20	2.4	32
ALL OTHER COMPUTER WORKERS	10	1.2	--
TOTAL PROFESSIONAL AND TECH	180	21.9	
3. CLERICAL AND ADMINISTRATIVE SUPPORT:			
SUPERVR, CLERICAL AND ADMIN SUPPORT	10	1.2	17
SECRETARIES, EXCEPT LEGAL & MEDICAL	20	2.4	16
RECEPTIONISTS & INFORMATION CLERKS	20	1.2	25
TYPISTS	10	2.4	33
BOOKKEEPING AND ACCOUNTING CLERKS	20	2.4	32
ALL OTHER CLERICAL & ADMIN SUPPORT	30	3.7	--
TOTAL CLERICAL AND ADMIN SUPPORT	110	13.4	

TABLE 7 (CONTINUED)

INDUSTRY 29

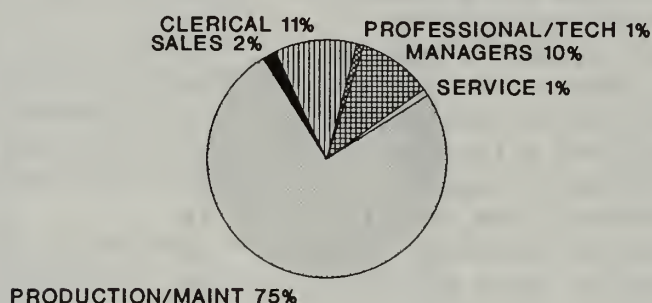
PETROLEUM REFINING AND RELATED INDUSTRIES

OCCUPATIONAL ESTIMATES			
OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
4. PRODUCTION, CONSTRUCTION, OPERATING, MAINTENANCE AND MATERIAL HANDLING:			
SUPERVR, MECHANICS,INSTALLERS&REPAIR	10	1.2	24
SUPERVR, CONSTRUCTION AND RELATED	10	1.2	20
SUPERVR, PRODUCTION AND RELATED	40	4.9	29
SUPERVR, HELPERS,LABORERS & MOVERS	10	1.2	29
ALL OTHER SUPR, PROD, CONST, MAINT	20	2.4	33
PRECISION INSPECTORS,TESTERS&GRADERS	10	1.2	35
PRODUCTION INSPECTORS & TESTERS	10	1.2	26
MACHINERY MAINTENANCE MECHANICS	10	1.2	25
MAINTENANCE REPAIRERS, GEN UTILITY	10	1.2	33
PRECISION INSTRUMENT REPAIRERS	10	1.2	26
MECHANICAL CONTROL & VALVE REPAIRERS	20	2.4	18
CARPENTERS	10	1.2	24
ELECTRICIANS	20	2.4	9
PLUMBERS AND PIPEFITTERS	20	2.4	40
CHEMICAL EQUIP CONTROLLERS &OPERATORS	20	2.4	33
ALL OTHER MACHINE OPER & TENDERS	10	1.2	--
WELDERS AND CUTTERS	30	3.7	6
PETROLEUM PUMP SYSTEM OPERATORS	20	2.4	45
PETROLEUM REFINERY & PANEL OPERATORS	130	15.9	37
GAUGERS	10	1.2	22
HEAVY TRUCK DRIVERS, INCL SEMI'S	10	1.2	45
ALL OTHER HELPERS,LABORERS&HAND WK	50	6.1	--
TOTAL PROD, CONST, MAINT & HANDL	490	59.8	
	-----	-----	
GRAND TOTAL OF INDUSTRY 29	820	100.0%	

STONE, CLAY, GLASS AND CONCRETE PRODUCTS

SIC 32

DISTRIBUTION OF OCCUPATIONAL GROUPS



ANNUAL AVERAGE EMPLOYMENT

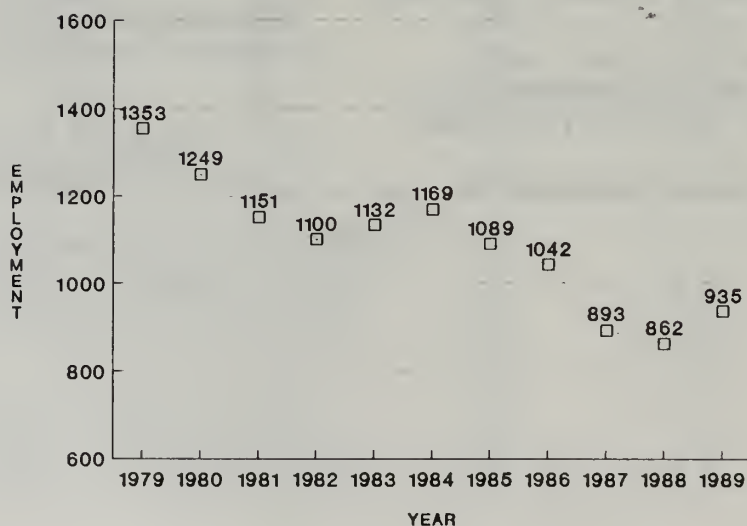


TABLE 8

INDUSTRY 32

STONE, CLAY, GLASS, AND CONCRETE PRODUCTS

THIS MAJOR GROUP INCLUDES ESTABLISHMENTS ENGAGED IN MANUFACTURING FLAT GLASS AND OTHER GLASS PRODUCTS, CEMENT, STRUCTURAL CLAY PRODUCTS, POTTERY, CONCRETE AND GYPSUM PRODUCTS, CUT STONE, ABRASIVE AND ASBESTOS PRODUCTS, AND OTHER PRODUCTS FROM MATERIALS TAKEN PRINCIPALLY FROM THE EARTH IN THE FORM OF STONE, CLAY AND/OR SAND.

OCCUPATIONAL ESTIMATES

OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
1. MANAGERIAL AND ADMINISTRATIVE:			
INDUSTRIAL PRODUCTION MANAGERS	20	2.2	23
GENERAL MANAGERS AND TOP EXEC	70	7.5	8
TOTAL MANAGERS AND ADMIN	90	9.7	
2. PROFESSIONAL AND TECHNICAL:			
ALL OTHER PROFESSIONAL AND TECH	10	1.1	--
TOTAL PROFESSIONAL AND TECH	10	1.1	
3. SALES AND RELATED:			
NONTECHNICAL SALES, EXCEPT RETAIL	20	2.2	19
TOTAL SALES AND RELATED	20	2.2	
4. CLERICAL AND ADMINISTRATIVE SUPPORT:			
SECRETARIES, EXCEPT LEGAL & MEDICAL	20	2.2	18
BOOKKEEPING AND ACCOUNTING CLERKS	50	5.3	13
GENERAL OFFICE CLERKS	20	2.2	24
DISPATCHERS, EXCEPT EMERGENCY	10	1.1	32
TOTAL CLERICAL AND ADMIN SUPPORT	100	10.8	
5. SERVICE:			
JANITORS AND CLEANERS	10	1.1	18
TOTAL SERVICE	10	1.1	

TABLE 8 (CONTINUED)

INDUSTRY 32

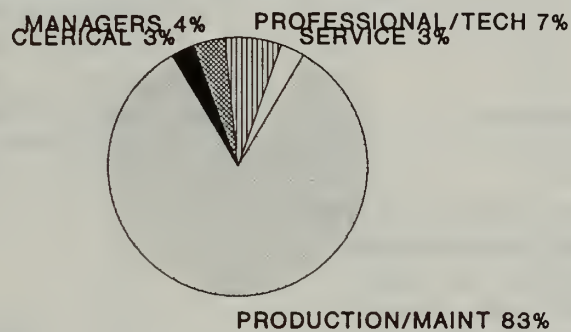
STONE, CLAY, GLASS, AND CONCRETE PRODUCTS

OCCUPATIONAL ESTIMATES			
OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
6. PRODUCTION, CONSTRUCTION, OPERATING, MAINTENANCE AND MATERIAL HANDLING:			
SUPERVR, PRODUCTION AND RELATED	50	5.3	9
PRECISION INSPECTORS, TESTERS & GRADERS	20	2.2	19
MACHINERY MAINTENANCE MECHANICS	10	1.1	22
MAINTENANCE REPAIRERS, GEN UTILITY	40	4.3	10
BUS, TRUCK & DIESEL ENGINE MECHANICS	20	2.2	24
ELECTRICIANS	10	1.1	0
CONCRETE & TERRAZZO FINISHERS	20	2.2	36
PAVING & RELATED EQUIPMENT OPERATORS	30	3.2	6
PRECISION MOLDERS, SHAPERS & CASTERS	90	9.6	25
FURANCE, KILN, OVEN OPERATORS	30	3.2	4
CRUSHING, MIXING, BLENDING OPERATORS	20	2.2	26
ALL OTHER MACHINE OPER & TENDERS	10	1.1	--
WELDERS AND CUTTERS	10	1.1	25
HEAVY TRUCK DRIVERS, INCL SEMI'S	250	26.9	8
GRADER, DOZER & SCRAPER OPERATORS	20	2.2	23
INDUSTRIAL TRUCK & TRACTOR OPERATORS	10	1.1	32
CONVEYOR OPERATORS & TENDERS	10	1.1	49
OPERATING ENGINEERS	20	2.2	39
ALL OTHER FREIGHT & MATERIAL MOVERS	20	2.2	12
ALL OTHER HELPERS, LABORERS & HAND WK	10	1.1	--
TOTAL PROD, CONST, MAINT & HANDL	700	75.2	
	-----	-----	
GRAND TOTAL INDUSTRY 32	930	100.0%	

PRIMARY METAL INDUSTRIES

SIC 33

DISTRIBUTION OF OCCUPATIONAL GROUPS



ANNUAL AVERAGE EMPLOYMENT

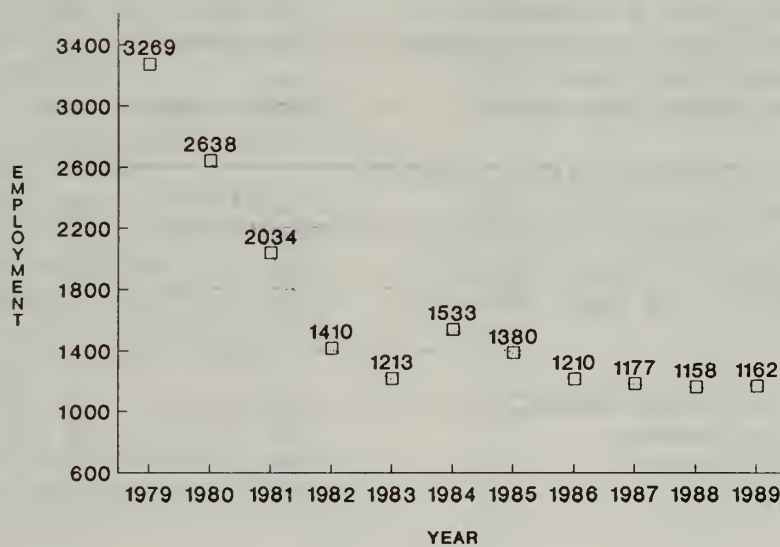


TABLE 9

INDUSTRY 33

PRIMARY METAL INDUSTRIES

THIS MAJOR GROUP INCLUDES ESTABLISHMENTS ENGAGED IN THE SMELTING AND REFINING OF FERROUS AND NONFERROUS METALS FROM ORE, PIG, OR SCRAP; IN THE ROLLING, DRAWING AND ALLOYING OF FERROUS AND NONFERROUS METALS; IN THE MANUFACTURE OF CASTINGS AND OTHER BASIC PRODUCTS OF FERROUS AND NONFERROUS METALS; AND IN THE MANUFACTURE OF NAILS, SPIKES, AND INSULATED WIRE AND CABLE. THIS MAJOR GROUP ALSO INCLUDES THE PRODUCTION OF COKE.

OCCUPATIONAL ESTIMATES

OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
1. MANAGERIAL AND ADMINISTRATIVE:			
INDUSTRIAL PRODUCTION MANAGERS	20	1.8	6
GENERAL MANAGERS AND TOP EXEC	10	.9	0
ALL OTHER MANAGERS AND ADMIN	10	.9	--
TOTAL MANAGERS AND ADMIN	40	3.6	
2. PROFESSIONAL AND TECHNICAL:			
ALL OTHER FINANCIAL SPECIALISTS	10	.9	--
COST ESTIMATORS	10	.9	--
METALLURGISTS AND RELATED ENGINEERS	10	.9	0
ALL OTHER ENGINEERS	10	.9	--
CHEMISTS	10	.9	--
CHEMICAL TECHNICIANS & TECHNOLOGISTS	10	.9	0
SYSTEM ANALYSTS,ELEC DATA PROCESSING	10	.9	0
ALL OTHER PROFESSIONAL AND TECH	10	.9	--
TOTAL PROFESSIONAL AND TECH	80	7.2	
3. CLERICAL AND ADMINISTRATIVE SUPPORT:			
BOOKKEEPING AND ACCOUNTING CLERKS	10	.9	15
STOCK CLERKS, STOCKROOM & WAREHOUSE	10	.9	0
ALL OTHER CLERICAL & ADMIN SUPPORT	20	1.8	--
TOTAL CLERICAL AND ADMIN SUPPORT	40	3.6	
4. SERVICE:			
SUPERVISORS, ALL OTHER SERVICE	10	.9	0
GUARDS AND WATCH GUARDS	10	.9	0
JANITORS AND CLEANERS	10	.9	0
TOTAL SERVICE	30	2.7	

TABLE 9 (CONTINUED)

INDUSTRY 33

PRIMARY METAL INDUSTRIES

OCCUPATIONAL ESTIMATES			
OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
5. PRODUCTION, CONSTRUCTION, OPERATING, MAINTENANCE AND MATERIAL HANDLING:			
SUPERVR, MECHANICS,INSTALLERS&REPAIR	20	1.8	0
SUPERVR, PRODUCTION AND RELATED	60	5.4	0
MILLWRIGHTS	40	3.6	0
MACHINERY MAINTENANCE MECHANICS	30	2.7	0
MACHINERY MAINTENANCE WORKERS	20	1.8	0
MAINTENANCE REPAIRERS, GEN UTILITY	20	1.8	0
AUTOMOTIVE MECHANICS	20	1.8	0
CARPENTERS	10	.9	0
ELECTRICIANS	50	4.5	0
BRICK MASONS	10	.9	0
PAINTERS AND PAPERHANGERS	10	.9	
PLUMBERS AND PIPEFITTERS	20	1.8	0
MACHINISTS	20	1.8	0
PRECISION FOUNDRY MOLD&CORE WKRS	10	.9	37
ALL OTHER PRECISION WORKERS	10	.9	--
EXTRUDING & DRAWING MACHINE OPER	20	1.8	0
METAL MOLD & CASTING OPERATORS	30	2.7	25
FOUNDRY MOLD ASSMB&SHAKEOUT WKRS	10	.9	33
FURNACE OPERATORS AND TENDERS	20	1.8	0
ALL OTHER MACHINE OPERATORS	10	.9	--
WELDERS AND CUTTERS	30	2.7	4
METAL POURERS AND CASTERS, BASIC	120	10.8	2
GRINDING &POLISHING WORKERS,HAND	10	.9	35
ALL OTHER HAND WORKERS	50	4.5	--
POWER DISTRIBUTORS & DISPATCHERS	10	.9	0
LIGHT TRUCK DRIVERS, INCL DELIVERY	10	.9	0
RAIL YARD ENGINEERS AND RELATED	10	.9	0
CRANE AND TOWER OPERATORS	20	1.8	0
INDUSTRIAL TRUCK AND TRACTOR OPER	30	2.7	0
CONVEYOR OPERATORS AND TENDERS	20	1.8	0
PUMP OPERATORS	20	1.8	0
MACHINE FEEDERS AND OFFBEARERS	10	.9	0
ALL OTHER FREIGHT &MATERIAL MOVERS	10	.9	--
ALL OTHER HELPERS,LABORERS&HAND WK	130	11.7	--
TOTAL PROD, CONST, MAINT & HANDL	920	82.9	

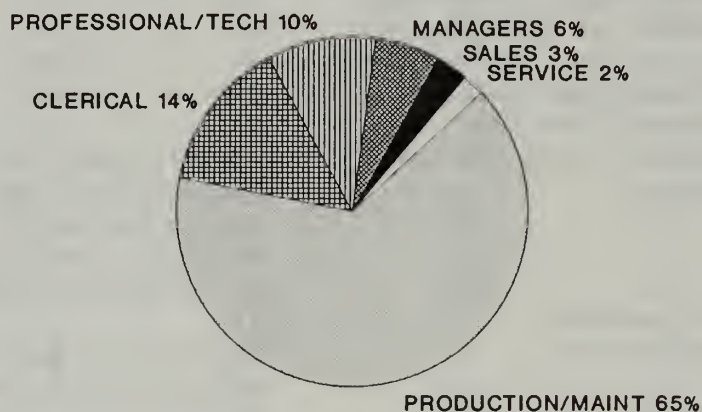
GRAND TOTAL OF INDUSTRY 33	1,110	100.0%	

INDUSTRIAL AND COMMERCIAL

MACHINERY & COMPUTER EQUIPMENT

SIC 35

DISTRIBUTION OF OCCUPATIONAL GROUPS



ANNUAL AVERAGE EMPLOYMENT

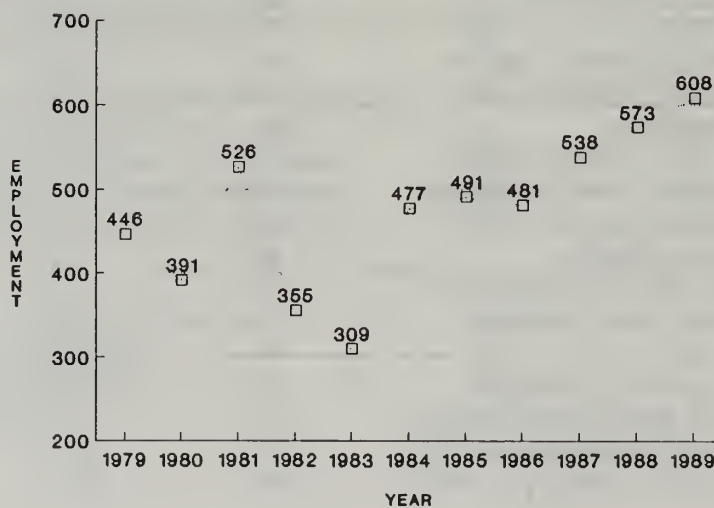


TABLE 10

INDUSTRY 35

MANUFACTURING OF INDUSTRIAL AND COMMERCIAL MACHINERY
AND COMPUTER EQUIPMENT

THIS MAJOR GROUP INCLUDES ESTABLISHMENTS ENGAGED IN MANUFACTURING MACHINERY AND EQUIPMENT AND COMPUTERS. ELECTRICAL EQUIPMENT IS CLASSIFIED IN INDUSTRY 36.

OCCUPATIONAL ESTIMATES

OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
1. MANAGERIAL AND ADMINISTRATIVE:			
FINANCIAL MANAGERS	10	1.6	49
INDUSTRIAL PRODUCTION MANAGERS	10	1.6	0
GENERAL MANAGERS AND TOP EXEC	20	3.2	36
TOTAL MANAGERS AND ADMIN	40	6.4	
2. PROFESSIONAL AND TECHNICAL:			
WHOLESALE/RETAIL BUYERS EXCEPT FARM	10	1.6	0
MECHANICAL ENGINEERS	10	1.6	24
ALL OTHER ENGINEERS	10	1.6	--
ELEC/ELECTRONIC ENGINEERING TECH	20	3.2	8
ALL OTHER PROF, PARAPROF, TECHNICAL	10	1.6	--
TOTAL PROFESSIONAL AND TECH	60	9.5	
3. SALES AND RELATED:			
SALES REPS, SCIENTIFIC & RELATED	10	1.6	43
ALL OTHER SALES AND RELATED	10	1.6	--
TOTAL SALES AND RELATED	20	3.2	
4. CLERICAL AND ADMINISTRATIVE SUPPORT:			
SECRETARIES, EXCEPT LEGAL & MEDICAL	30	4.8	35
BOOKKEEPING AND ACCOUNTING CLERKS	30	4.8	25
PRODUCTION & PLANNING CLERKS	10	1.6	0
STOCK CLERKS, STOCKROOM & WAREHOUSE	10	1.6	0
TRAFFIC, SHIPPING & RECEIVING CLERKS	10	1.6	24
TOTAL CLERICAL AND ADMIN SUPPORT	90	14.3	

TABLE 10 (CONTINUED)

INDUSTRY 35

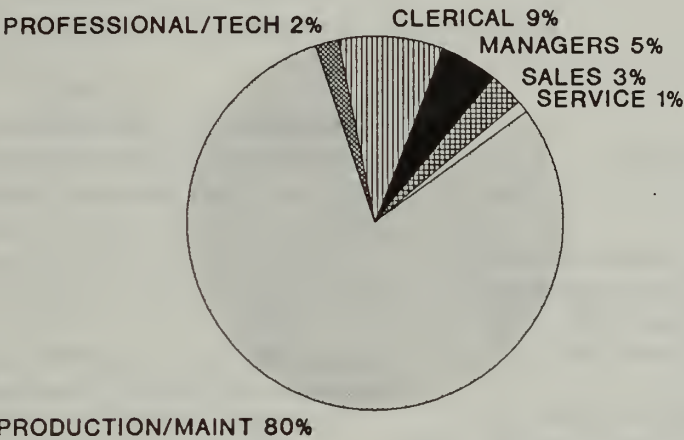
INDUSTRIAL AND COMMERCIAL MACHINERY AND COMPUTER EQUIPMENT

OCCUPATIONAL ESTIMATES			
OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
5. SERVICE:			
JANITORS AND CLEANERS	10	1.6	43
TOTAL SERVICE	10	1.6	
6. PRODUCTION, CONSTRUCTION, OPERATING, MAINTENANCE AND MATERIAL HANDLING:			
SUPVR, PRODUCTION AND RELATED	20	3.2	27
PRECISION INSPECTORS, TESTERS, GRADERS	10	1.5	0
MACHINERY MAINTENANCE MECHANICS	10	1.5	33
MAINTENANCE REPAIRERS, GEN. UTILITY	10	1.5	43
MACHINISTS	70	11.1	14
ALL OTHER PRECISION METAL WORKERS	10	1.5	--
MACHINE TOOL CUTTING OPERATORS	20	3.2	32
MACHINE FORMING OPERATORS	10	1.5	0
WELDING MACHINE OPERATORS	20	3.2	48
COATING & PAINTING MACH OPERATORS	10	1.5	28
ALL OTHER MACHINE OPER & TENDERS	30	4.8	--
PRECISION ELECTROMECH ASSEMBLERS	10	1.5	0
PRECISION ELECTRICAL ASSEMBLERS	30	4.8	0
MACHINE ASSEMBLERS	20	3.2	0
ELECTRICAL/ELECTRONIC ASSEMBLERS	10	1.5	0
WELDERS AND CUTTERS	60	9.5	37
ASSEMBLERS & FABRICATORS, NONELEC	50	7.9	29
ALL OTHER HELPERS, LABORERS, HAND WORK	10	1.5	--
TOTAL PROD, CONST, MAINT & HANDL	410	65.0	
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GRAND TOTAL OF INDUSTRY 35	630	100.0%	

MISCELLANEOUS MANUFACTURING

SIC 39

DISTRIBUTION OF OCCUPATIONAL GROUPS



ANNUAL AVERAGE EMPLOYMENT

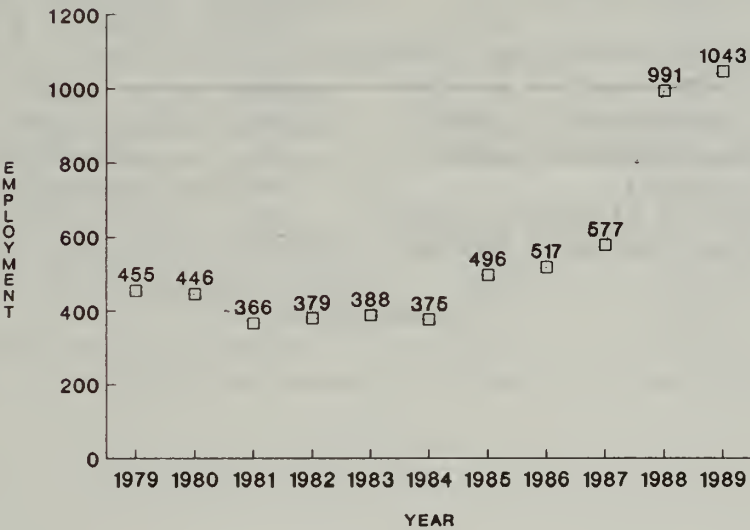


TABLE 11

INDUSTRY 39

MISCELLANEOUS MANUFACTURING INDUSTRIES

THIS MAJOR GROUP INCLUDES ESTABLISHMENTS PRIMARILY ENGAGED IN MANUFACTURING PRODUCTS NOT CLASSIFIED IN ANY OTHER MANUFACTURING MAJOR GROUP. INDUSTRIES IN THIS GROUP FALL INTO THE FOLLOWING CATEGORIES: JEWELRY, SILVERWARE AND PLATED WARE; MUSICAL INSTRUMENTS; TOYS, SPORTING AND ATHLETIC GOODS; PENS, PENCILS, AND OTHER OFFICE AND ARTISTS' MATERIALS; BUTTONS, COSTUME NOVELTIES, MISCELLANEOUS NOTIONS; BROOMS AND BRUSHES; CASKETS; AND OTHER MISCELLANEOUS MANUFACTURING INDUSTRIES.

OCCUPATIONAL ESTIMATES

OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
1. MANAGERIAL AND ADMINISTRATIVE:			
INDUSTRIAL PRODUCTION MANAGERS	10	1.0	43
GENERAL MANAGERS AND TOP EXEC	40	3.8	20
TOTAL MANAGERS AND ADMIN	50	4.8	
2. PROFESSIONAL AND TECHNICAL:			
WHOLESALE/RETAIL BUYERS EXCEPT FARM	10	1.0	17
DESIGNERS, EXCEPT INTERIOR DESIGN	10	1.0	32
TOTAL PROFESSIONAL AND TECH	20	1.9	
3. SALES AND RELATED:			
SALES REPS, EXCEPT SCIENTIFIC	30	2.9	13
TOTAL SALES AND RELATED	30	2.9	
4. CLERICAL AND ADMINISTRATIVE SUPPORT:			
SECRETARIES, EXCEPT LEGAL & MEDICAL	20	2.0	9
ORDER CLERKS, MERCHANDISE & SERVICE	10	1.0	0
BOOKKEEPING AND ACCOUNTING CLERKS	10	1.0	17
GENERAL OFFICE CLERKS	30	2.8	32
TRAFFIC, SHIPPING & RECEIVING CLERKS	30	2.8	19
TOTAL CLERICAL AND ADMIN SUPPORT	100	9.6	

TABLE 11 (CONTINUED)

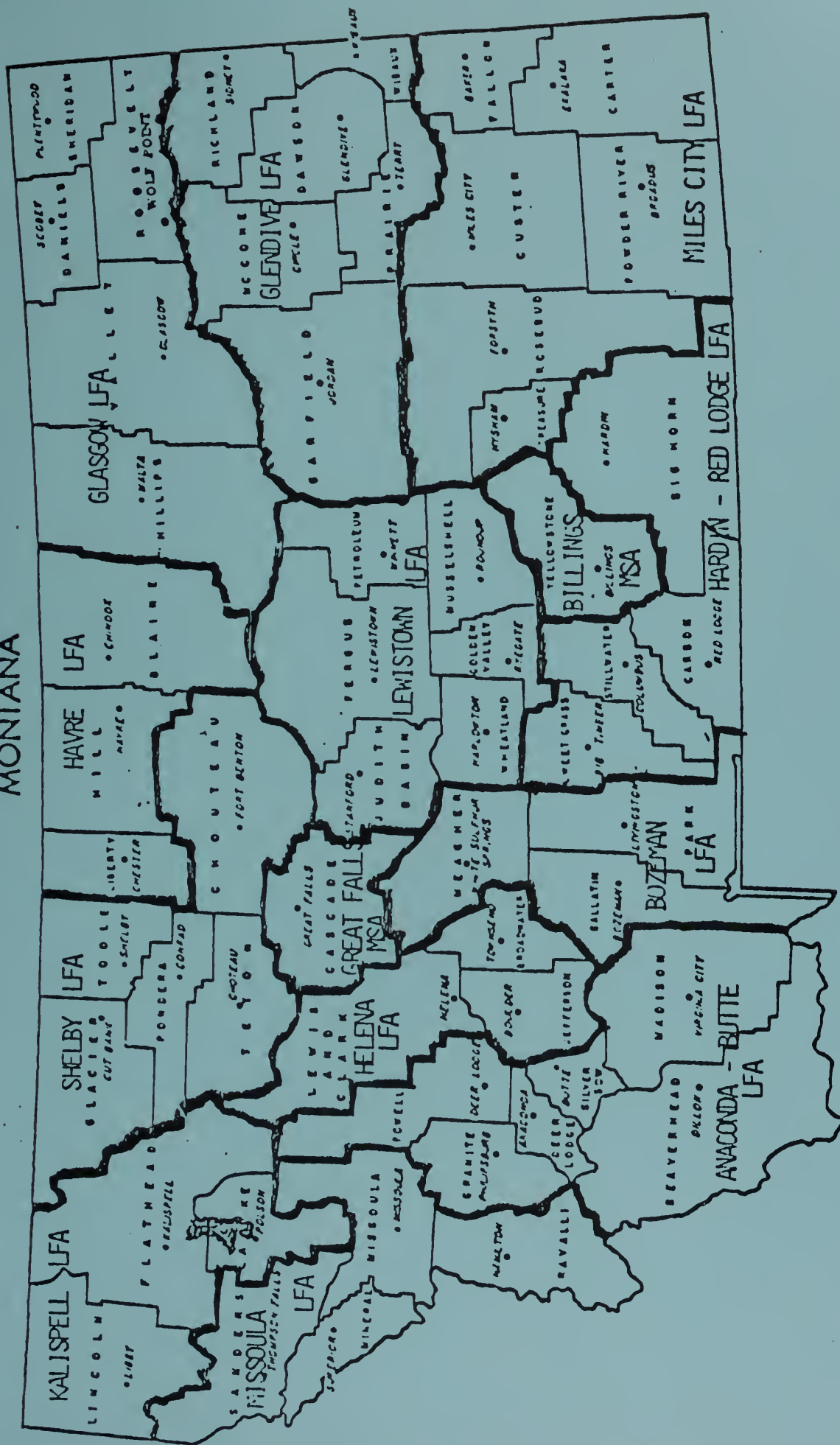
INDUSTRY 39

MISCELLANEOUS MANUFACTURING INDUSTRIES

OCCUPATIONAL ESTIMATES			
OCCUPATION	ESTIMATED EMPLOYMENT	PERCENT OF TOTAL EMPLOYMENT	PERCENT RELATIVE ERROR
5. SERVICE:			
JANITORS AND CLEANERS	10	1.0	40
TOTAL SERVICE	10	1.0	
6. PRODUCTION, CONSTRUCTION, OPERATING, MAINTENANCE AND MATERIAL HANDLING:			
SUPVR, PRODUCTION AND RELATED	70	6.9	11
PRODUCTION INSPECTORS,TESTERS&GRADERS	20	1.9	24
MAINTENANCE REPAIRERS, GEN. UTILITY	10	1.0	24
ALL OTHER MECHANICS,INSTALLERS&REPAIR	20	1.9	34
MACHINISTS	10	1.0	46
PRECISION HAND WORKERS,JEWELRY&RELATD	10	1.0	0
PRECISION HAND/MACH ETCHERS&ENGRAVERS	10	1.0	0
ALL OTHER PRECISION METAL WORKERS	10	1.0	--
CABINETMAKERS & BENCH CARPENTERS	30	2.9	0
GRINDING, BUFFING MACHINE OPERATORS	10	1.0	35
MACHINE TOOL CUTTING OPERATORS	10	1.0	31
MACHINE FORMING OPERATORS	20	1.9	0
PLASTIC MOLD &CASTING MACH OPERATORS	10	1.0	28
SCREEN PRINTING MACHINE OPERATORS	10	1.0	35
SEWING MACHINE OPERATOR, NONGARMENT	290	27.9	7
HAND CUTTING & TRIMMING WORKERS	20	1.9	37
HAND PAINTING & DECORATING WORKERS	10	1.0	36
HAND GRINDING & POLISHING WORKERS	10	1.0	0
ASSEMBLERS & FABRICATORS, NONELEC	180	17.3	4
ALL OTHER HAND WORKERS	10	1.0	--
MACHINE FEEDERS & OFFBEARERS	20	1.9	0
HAND PACKERS & PACKAGERS	20	1.9	23
ALL OTHER HELPERS,LABORERS,HAND WK	20	1.9	--
TOTAL PROD, CONST, MAINT & HANDL	830	79.8	
GRAND TOTAL OF INDUSTRY 39	1,040	100.0%	

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